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September 16, 2017 134:30 ET

## **HURRICANE HARVEY MANAGEMENT REPORT**

*Information contained in this report reflects HQ and regional reporting from the most recently completed operational period as well as other reports provided by HQ, regional and interagency sources. The Senior Leadership Briefing and DHS Component Actions Reports are attached.*

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### **National Incident Management Objectives**

- Objective 1: Ensure that health and safety of the EPA response is considered at all times.
- Objective 2: Establish an incident management structure and processes employing the Incident Command System to enable effective overall management of the event with deployment of resources (staff and equipment) in a rapid, aggressive and well-coordinated manner.
- Objective 3: Ensure prompt Review and Processing of Fuel Waiver requests.
- Objective 4: Prepare for and provide Rapid Assessment of Industrial facilities as requested by the State or under EPA's statutory program responsibilities for CERCLA Superfund, RMP and FRP facilities. Working with our state partners, contact industrial sources within the impacted area to determine their operational status and determine what support can be provided with the monitoring of the start-up of industrial sources.
- Objective 5: Prepare for and provide Rapid Assessment & Technical Assistance Drinking Water & Wastewater facilities as requested by the State or local government. EPA will support our state partners in contacting drinking water and waste water systems.
- Objective 6: Prepare a Sustained Response Plan that outlines the resource and equipment needs for a long duration response.
- Objective 7: Activate the Agency's Crisis Communication Plan to insure effective and efficient coordination of all incident communications.
- Objective 8: Encourage a collaborative federalism approach, where national, state and local governments interact cooperatively and collectively to solve common problems.
- Objective 9: Begin Agency internal and external coordination, under the National Disaster Recovery Framework, regarding Recovery Support Functions in which EPA is likely to be involved.

## Executive Summary

- EPA received a report last night at approximately 21:30 CT of a fire at the Enterprise Products facility in Mont Belvieu, Texas. The facility was monitored earlier in the day by the Trace Atmospheric Gas Analyzer (TAGA) mobile laboratory. EPA contacted the facility and was informed the fire involved butane, associated with a degasser unit. The fire was out by approximately 23:00 CT.
- The Texas Commission on Environmental Quality (TCEQ) submitted a request to FEMA to amend the Emergency Support Function (ESF-10) Mission Assignment (MA) for an additional \$7.5 million. If approved, total funding for assessment and response will be \$17.5 million.
- EPA and TCEQ field observation teams will observe debris staging and landfill operations within the hurricane impacted counties in Texas to ensure best practices and program requirements are being met. The state estimates debris will total approximately 200 million cubic yards. Observations began in Houston on September 14th; observations will begin in Corpus Christi on September 18<sup>th</sup>. A federal Debris Management Taskforce has been established at the JFO in Austin and EPA is a member of the Taskforce.
- EPA, FEMA and TCEQ are recovering and staging orphan containers for proper disposal. The Corpus Christi Branch expected to complete activities on September 15<sup>th</sup>. Containers on the staging pad will be transferred to Houston Branch. The Port Arthur/Beaumont Branch is projected to complete recovery activities by early October and the Houston Branch by mid-October.
- Drinking water and wastewater assessment teams completed their emergency assessments of community water systems and demobilized on September 15<sup>th</sup>. A total of 625 drinking water and 441 wastewater assessments were performed. Of the 2,022 systems designated for follow up, EPA's collaborative work with the state has ensured the return of 1,945 community water systems to fully operational status. These systems cover 99% of the population in the greater Houston area (7.23 out of 7.26 million served). The remaining system restorations and lifting of boil water notices oversight will be transitioned to the TCEQ regional offices.
- Sampling at the 9 Louisiana Superfund sites (Highland Acid Pits, United Creosote, Conroe Creosoting, Tex Tin, Sheridan Disposal Services and Brio Refining) was completed and show that they were not impacted by the storm. EPA's dive team will collect samples at the San Jacinto Waste Pits Superfund site September 15<sup>th</sup> to ensure the temporary cap of the site did not release contaminants. The responsible party continues to repair the armored layer of the cap.
- EPA has concluded that the probable source of benzene and volatile organic compound readings in Houston was a roof failure and spill from a light crude storage tank at the Valero Houston Refinery. EPA conducted a facility RMP inspection and issued a Clean Air Act Section 114 information request to Valero on September 14<sup>th</sup>.
- TAGA conducted air monitoring assessments of three facilities near Deer Park that have claimed force majeure under existing consent decrees due to damage from Hurricane Harvey. TAGA will not be monitoring September 16<sup>th</sup> due to a mandated day of rest for the crew.

### Region 6 Significant Activities

The R6 Region Emergency Operations Center (REOC) is currently activated and working under a limited Emergency Support Function (ESF) #10 FEMA Mission Assignment (MA). EPA has received MAs for over \$10.3 million for recovery operations to include assisting TX with drinking water, wastewater, and hazmat recovery operations. FEMA announced plans to fund mission assignments in five-day increments.

Mission Assignment Number	Funding Amount	Description of Assignment
MA4332DRTXEPA3	\$10,092,000	R6 Field Ops incl. assessing drinking & waste water infrastructure, implementation of Response Manager tracking system, response to hazardous substance releases and oil discharges.
MA4332DRTXEPA1	\$275,000	Deployment of EPA to various locations, including but not limited to TX EOC and the FEMA RRCC to support response operations.
<b>Total Funds</b>	<b>\$10,367,000</b>	

### Number of R6 Personnel Involved

Personnel	EPA R6 Dallas	FEMA Denton	Texas JFO Austin	TX SOC Austin	TCEQ Austin	Houston	Corpus Christi	Beaumont/ Port Arthur	Totals
<b>R6</b>	57	0	2	3	0	74	12	9	157
<b>START</b>	5	0	0	1	0	7	13	9	35
<b>ERRS</b>	0	0	0	2	0	5	10	15	32
<b>Other Contractor</b>	0	0	0	0	0	0	0	0	0
<b>TOTAL</b>	62	0	2	6	0	86	35	33	224

## **Debris Recovery Operations**

Joint EPA and TCEQ field observation teams continue to observe debris staging and landfill operations within the hurricane impacted counties in Texas to ensure best practices and program requirements are being met. The State of Texas estimates debris to total 20 million cubic yards. Observations were completed at 29 sites in the Houston area on September 14<sup>th</sup> and additional sites were observed on September 15<sup>th</sup>; observations will begin in Corpus Christi on September 18<sup>th</sup>. EPA is a member of the Debris Management Taskforce at the JFO in Austin.

## **Container Recovery Operations**

This chart includes daily and cumulative data on container recovery.

<b>Waste Received at All Staging Pads to Date</b>					
	<b>CONTAINERS</b>			<b>Cylinders</b>	<b>TOTAL</b>
	<b>Drums [55 gals]</b>	<b>Small Containers [&lt;55 gals]</b>	<b>Large Containers [&gt;55 gals]</b>		
<b>9/15/2017</b>	45	21	2	6	74
<b>TOTAL TO DATE</b>	<b>313</b>	<b>191</b>	<b>19</b>	<b>68</b>	<b>591</b>

### **Corpus Christi Branch**

One Oil/Vessel Discharge Team observed salvage operations of the Signet Enterprise at Aransas Pass, assessed targets in Sea Drift and Victoria Barge Canal, and assessed additional pollution reports. A second team responded to and investigated National Response Center (NRC) and ChemTel reports of active pollution discharges and assured actions were being taken to recover the pollution.

### **Houston Branch**

The Oil Discharge Assessment Team investigated a reported spill in Montgomery based on an NRC report and continued to verify and collect additional information on closed targets. The Emergency Response and Orphan Container Recovery Teams continued recovering targets in Harris, Brazoria, and Galveston counties.

### **Beaumont/Port Arthur Branch**

The Hazard Evaluation Team conducted an assessment at the Beaumont Yacht Club to confirm the removal of a pontoon boat. The Oil/Vessel Discharge Team completed assessments of targets outside Motiva Refinery, Orange, Vidor, and Beaumont. All targets were closed in Orange.

The Orphan Container Recovery Teams retrieved multiple containers from Sabine Pass and Vidor. Containers identified to be retrieved at Texas State Highway 87 in High Island will require an airboat.

### **Emergency and Field Response Operations**

Region 6 continues to collect and stage recovered orphan containers. They anticipate completion in Corpus Christi, Houston, and Beaumont over the next 30 days.

Daily/Cumulative Summary of Hazard Evaluations/Recovery				
Status	Opened		Closed	
	9/14/2017	Number of Targets Remaining Open	9/14/2017	Cumulative
Corpus Christi Branch	5	5	3	97
Houston Branch	60	104	130	258
Port Arthur/Beaumont Branch	1	1	0	0
NRC Reports	42	45	21	67
<b>TOTALS</b>	<b>108</b>	<b>155</b>	<b>154</b>	<b>422</b>

Note: Open means the target is yet to be recovered. Closed means the target was recovered left in place or access was denied to collect the item.

FIELD TEAMS ON 9/15/2017				
Teams	Alpha	Bravo	Charlie	TOTAL
Hazard Evaluation	1	1	4	6
Oil Discharge Assessment	4	3	0	7
ER/Orphan Container Recovery	1	15	4	20
Oil/Vessel Recovery	2	1	0	3
Staging Areas	1	1	1	3
Air Operations	0	1	0	1
Air Monitoring	0	1	0	1
Water Infrastructure Assessment – Drinking Water	0	1	0	1
Water Infrastructure Assessment – Wastewater	0	1	0	1
<b>TOTAL</b>	<b>9</b>	<b>25</b>	<b>9</b>	<b>43</b>

Daily/Cumulative Summary of Spills/Discharges (NON-VESSELS)				
Status	Opened		Closed	
	9/15/17	Number of Facilities/Spills Remaining Open	9/15/17	Cumulative
Corpus Christi Branch	1	1	0	33
Houston Branch	0	4	1	74
Port Arthur/Beaumont Branch	2	9	4	17
NRC Reports	2	19	3	103
<b>TOTALS</b>	<b>5</b>	<b>33</b>	<b>8</b>	<b>227</b>

Note: Open means the target is yet to be recovered cleaned up. Closed means the target was recovered cleaned up by a Responsible Party or not found upon return to location.

### EPA Headquarters Significant Activities:

The HQ EOC is activated to Level 1 in support of the Region 6 response for Hurricane Harvey. The HQ EOC is coordinating with Region 6 and other Federal agencies. The HQ EOC has deployed personnel to the FEMA NRCC to staff the ESF-10 desk. EPA Senior Management that comprise the Policy Coordinating Committee (PCC) developed and issued senior management objectives that form the basis of field strategy and tactics in response to Harvey.

### Headquarters Mission Assignments

Mission Assignment Number	Funding Amount	Description of Assignment
MA4332DRTX1	\$10,000	FEMA HQ ESF-10 Desk Support
4332DRTXEPA02	\$40,000	FEMA HQ ESF-10 Desk Support
<b>Total Funds</b>	<b>\$50,000</b>	

### Number of HQ Personnel Involved in the EOC

Personnel	AO	OAR	OCFO	OCSPP	OECA	OEI	OGC	OLEM	OP	ORD	OW	ATSDR	Totals
Employees	0	0	1	0	0	2	1	1	14	1	1	1	22
Contractors	0	0	0	0	0	3	0	3	0	0	0	0	6
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>1</b>	<b>4</b>	<b>14</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>28</b>

### Superfund NPL Sites

EPA provided oversight to potentially responsible parties (PRPs) and independently started collecting samples at 34 TX Superfund Sites and nine LA Sites to confirm no releases due to storm impacts. The sampling is part of a longer term assessment that will be used to transition sites back to normal cleanup operations. Preliminary un-validated results for sites located in Texas are expected by September 16<sup>th</sup> and for the sites located in Louisiana by September 18<sup>th</sup>.

All 43 Federal Superfund NPL Sites in the affected area have been assessed. Of these, 41 sites have been cleared, and two sites (San Jacinto Pits and US Oil) require additional follow-up.

- San Jacinto Waste Pits: The responsible party completed all manual probing activities of the cap on September 14<sup>th</sup>. On September 15<sup>th</sup>, the EPA Dive Team collected underwater sediment samples for dioxin/furan analysis in areas where gaps in the cap were found. The PRPs' dive

team is collecting sediment samples from the same areas for the same analysis. Results are expected by September 21<sup>st</sup>.

- US Oil: The PRP continues pump-down operations to maintain freeboard. Since the time the pump-down operations began, the PRP has removed approximately 320,000 gallons of storm water from the site. The PRP Group will monitor the lift station freeboard levels over the weekend and perform additional pump-downs if needed.

### **Texas A&M Superfund Research Grant**

Texas A&M's Houston Campus runs a Superfund Research Program under an EPA grant to do the following emergency response evaluation: *Comprehensive Tools and Models for Addressing Exposure to Mixtures during Environmental Emergency-Related Contamination Events*. Texas A&M started sampling in Houston prior to Harvey, and, when they saw the storm coming, collected additional environmental samples. Texas A&M is planning to re-sample in those areas and evaluate the change. Texas A&M's Superfund grant was awarded this current fiscal year in an effort to develop tools and models for EPA.

### **Air Monitoring**

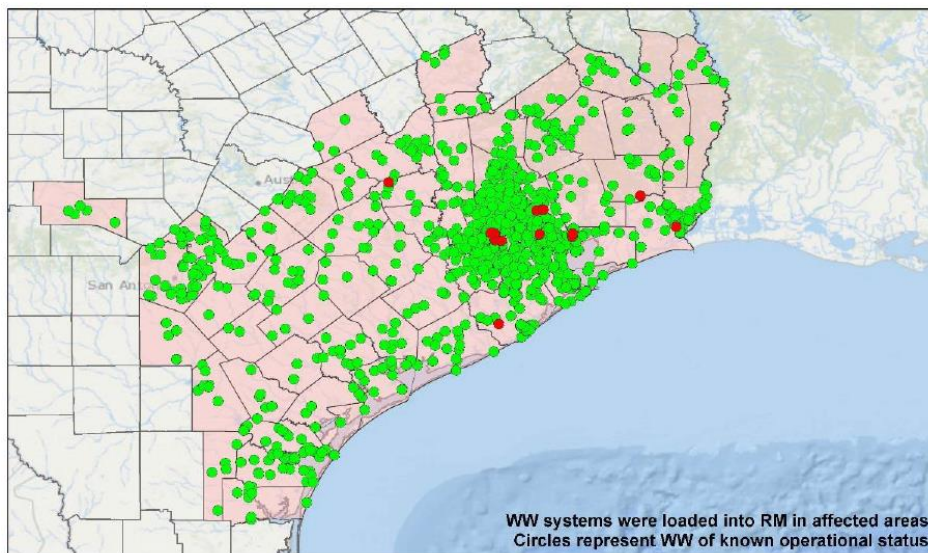
On September 14<sup>th</sup>, TAGA conducted monitoring in areas around industrial facilities, including the Shell Deer Park Refinery, Shell Deer Park Chemical Plant, and Vopak Deer Park. Lyondell Basell. No readings were above the TCEQ Air Monitoring Comparison Values short-term screening levels.

### **Drinking Water/Wastewater Assessments**

EPA continues to support to TCEQ for drinking water and wastewater system assessments. See maps below for details.

<b>Drinking Water and Waste Water Assessments (September 14<sup>th</sup>)</b>		
<b>Assessment Types</b>	<b>Daily Assessments</b>	<b>Total Assessments</b>
<b>On-Site DW Assessments</b>	<b>51</b>	<b>625</b>
<b>On-Site WW Assessments</b>	<b>39</b>	<b>441</b>
<b>Phone DW Assessments</b>	<b>300</b>	<b>6754</b>
<b>Phone WW Assessments</b>	<b>27</b>	<b>4639</b>





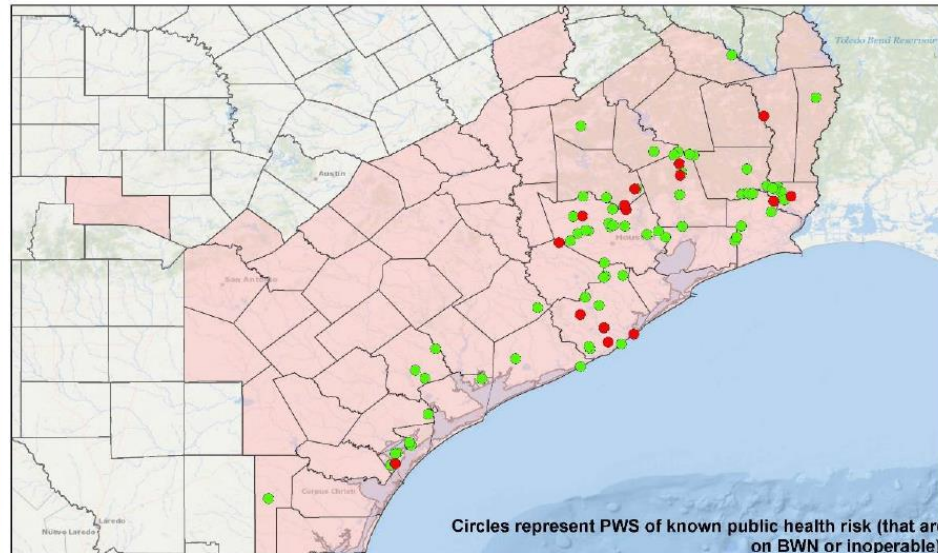
- Legend**
- Not Operational
  - Operational
  - State Declared Counties

US EPA Region 6  
Hurricane Harvey Response  
**Wastewater Status Map in Hurricane  
Harvey Declared Areas**  
0600 CDT 20170915



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- Legend**
- Water Outage
  - Boiled Water Notice
  - State Declared Counties

US EPA Region 6  
Hurricane Harvey Response  
**Drinking Water Status Map in  
Hurricane Harvey Affected Areas**  
0600 CDT 20170915



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## Other EPA Activities

### Fuel Waivers

Affected State	Waiver Request	Date Received	Status Talking Point	Waiver Response
<b>Reid Vapor Pressure Requirements Waivers</b>				
TX	Letter from TCEQ requesting a waiver of the RVP, RFG and TxLED standards in the Governor's Disaster Proclamation	8/25/17	Granted on 8/25/17	<a href="https://www.epa.gov/newsreleases/epa-acts-continue-waiver-fuel-requirements-texas">https://www.epa.gov/newsreleases/epa-acts-continue-waiver-fuel-requirements-texas</a>
GA	Amended letter from GA Department of Natural Resources for Atlanta RVP to waive 7.8 RVP requirement to 11.5 RVP	8/29/17	Granted on 8/29/17	<a href="https://www.epa.gov/enforcement/louisiana-fuels-waiver">https://www.epa.gov/enforcement/louisiana-fuels-waiver</a>
LA	Letter from LA governor requesting a waiver of the low RVP requirements.	8/28/17	Granted on 8/28/17	<a href="https://www.epa.gov/sites/production/files/2017-08/documents/louisianafuelswaiver082817.pdf">https://www.epa.gov/sites/production/files/2017-08/documents/louisianafuelswaiver082817.pdf</a>
AR	The state is drafting a waiver request to temporarily waive the requirement for low 9.0lb RVP fuel.	8/31/17	N/A	N/A
OK	A statewide low RVP fuel waiver request was submitted and then the request was amended.	8/28/17	8/30/17	<a href="https://www.epa.gov/enforcement/second-multi-state-fuels-waivers">https://www.epa.gov/enforcement/second-multi-state-fuels-waivers</a>
<b>Dyed NRLM Diesel Fuel Waiver</b>				
TX	Letter from TX comptroller requesting a waiver of using dyed NRLM diesel fuel in motor vehicles.	8/29/17	Granted on 8/29/17; IRS expanded to cover all of TX on 9/3/17	<a href="https://www.epa.gov/enforcement/texas-diesel-waiver">https://www.epa.gov/enforcement/texas-diesel-waiver</a>
Florida	Florida Department of Environmental Protection requests use of 15 parts per million sulfur non-road diesel to be used as highway diesel fuel, waiving red dye requirements	9/6/17	Granted 9/6/17 through 9/22/17	URL pending
<b>Low Volatility Conventional Gasoline and Reformulated Gasoline (RFG)</b>				

Affected State	Waiver Request	Date Received	Status Talking Point	Waiver Response
Multi State*	<p>*CT, ME, MA, NH, RH, VT, DE, DC, MD, NJ, NY, and PA, FL, GA, NC, SC, VA, and WV; all mid-western states located in *PADD 2 - IL, IN, IA, KS, KY, MI, MN, MO, NE, ND, SD, OH, OK, TN, and WI; and all Gulf coast states located in PADD 3 –AL, AR, LA, MS, NM, and TX</p> <p>Issuance of waivers based on requests for the allowance of regulated parties within the listed states to produce, sell, or distribute conventional winter gasoline (including BOBs) with an RVP of 11.5 psi before the addition of any ethanol in any RFG covered area. The waiver for El Paso goes until September 16<sup>th</sup> due to their State Implementation Plan requirements.</p>	8/30/17	Granted on 8/31/17	<a href="https://www.epa.gov/enforcement/second-multi-state-fuels-waivers">https://www.epa.gov/enforcement/second-multi-state-fuels-waivers</a>

**\*PADD: Petroleum Administration for Defense Districts**

#### Communications:

The Crisis Communication Plan remains activated. EOC Public Information Officer (PIO) continues to work on developing fact sheets on issues regarding the recovery including how to handle household hazardous waste and other debris. Region 6 PIO and Data Management team created a *Region 6 Hurricane Harvey - Public Story Map*. The map is located at this link:

<https://epa.maps.arcgis.com/apps/MapJournal/index.html?appid=fadbae6b2832436fb65ca497bd75b9a6>

EPA issued a news release announcing that Administrator Pruitt approved a request from the State of Texas to continue to waive requirements for fuels in Texas through October 1. <https://www.epa.gov/newsreleases/epa-acts-continue-waiver-fuel-requirements-texas>

A flyer designed for home owners, was distributed through social media and to congressional offices, industry, environmental justice and community contacts. The guidelines include directions on correctly separating debris and on locating debris curbside for pickup.